Claims:

1. RF excited gas laser comprising:

an elongated electronics compartment having elongated external fins; and

an RF power supply placed inside electronics compartment; and

a pair of endplates attached to the opposite ends of the electronics compartment; and

a sealed laser tube comprising of a metal tube having an external surface, a pair of endcaps at the opposite ends of the metal tube forming a vacuum envelope for containing a laser gas and at least one pair of elongated electrodes inside of the metal tube configured for coupling to said RF power supply through RF coupling means; and

a pair of laser resonator mirrors placed on the endcaps at the opposite ends of the tube forming a laser resonator aligned with the RF gas plasma discharge produced between said electrodes; and

a sheet-metal cover enclosing the laser tube and the electronics compartment forming a laser assembly having at least one pair of intake openings and at least one pair of exhaust openings for the cooling air to flow through the laser assembly; and

at least one pair of fans placed at the intake openings of the laser assembly;

wherein said laser tube is placed inside the laser assembly and is flexibly attached to the endplates allowing for cooling air to enter the laser assembly through the intake openings and to flow through the laser assembly over the external surface of the tube and over the external fins of the electronic compartment and then exit the laser assembly through the exhaust openings.

2. The laser of claim 1 wherein said RF coupling means comprise vacuum sealed RF electrical feedthrough connected to at least one electrode and coupled to said RF power supply.
3. The laser of claim 1 wherein said laser tube having square cross-section.
4. The laser of claim 1 wherein said external surface of the laser tube comprises elongated fins to facilitate heat transfer from the tube to the flowing air.
5. The laser of claim 1 wherein said electrodes inside laser tube are closely spaced to the walls of the tube to facilitate heat transfer from electrodes to the tube.
6. The laser of claim 5 wherein said electrodes inside laser tube are centered against the opposite corners of the laser tube.

7. The laser of claim 1 wherein multiple pairs of electrodes are placed inside laser tube to define a longer laser resonator consisting of multiple discharge sections.
8. The laser of claim 1 wherein said laser gas includes CO_2, N_2 and He.